

REMARKS

Entry of the amendments is respectfully requested. Claims 1, 2, 5, 6, 7, 11, 18, 19 and 21 have been amended. Claims 6 and 7 have been amended to correct typographical errors. Claims 1-21 are pending in the application. Applicant gratefully acknowledges the Examiner's finding that claims 5, 6 and 19 contain patentable subject matter. Claims 5 and 19 have been rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

In the specification, paragraphs have been amended on pages 4 and 5 to correspond to the formal drawings submitted herewith. In particular, references to FIG. 5 have been changed to FIGS. 5a-5e.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

1. Claim Rejections – 35 U.S.C. § 103(a)

a. Claims 1-4, 7, 9, 11-13, 17, 18 and 20

Claims 1-4, 7, 9, 11-13, 17, 18 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dykema et al. ("Dykema," U.S. Patent No. 5,854,593) in view of Roberts et al. ("Roberts," U.S. Patent No. 5,225,847). Applicants respectfully traverse the rejection. Claims 1, 11 and 18 have been amended to further define the invention. Claim 2 has been amended to correspond to the language of amended claim 1. Claim 7 has been amended to correct a typographical error.

Amended claim 1 is directed to a transmitter for transmitting a device activation signal or other data and recites, among other limitations:

a controller operable in a operating mode for providing a tune level signal . . . ;

a transmission antenna assembly coupled to the signal generator circuit and the controller, . . . ;

a detector circuit for detecting the power level of the device activation signal, the detector circuit providing the detected power level to the controller;

wherein the controller is further operable for tuning the transmission antenna assembly based on the detected power level including tuning the transmission antenna assembly before applying a modulation scheme such that the power level of the device activation signal is controlled and tuning the transmission antenna assembly over a limited tuning range while applying the modulation scheme.

Amended claim 11 is directed to a transmitter system for transmitting a device activation signal and recites, among other limitations:

a controller operable in an operating mode . . . ;

a transmission antenna assembly, . . . ;

a detector circuit for detecting a power level representative of the transmitted activation signal power output, the detector circuit coupled to the controller for providing the detected power level;

wherein the controller is further operable for tuning the transmission antenna assembly based on the detected power level including tuning the transmission antenna assembly before applying a modulation scheme such that the power level of the device activation signal is controlled and tuning the transmission antenna assembly over a limited tuning range while applying the modulation scheme.

Amended claim 18 is directed to a method of transmitting a device activation signal for remotely actuating a device and recites, among other limitations:

adjusting the antenna assembly tuning signal in response to the detected activation signal power level;

wherein the antenna assembly tuning signal is adjusted before applying a modulation scheme such that the activation signal power level is controlled and the antenna assembly tuning signal is adjusted while applying the modulation scheme.

As discussed in the specification, when a switch of the trainable transceiver is actuated, tuning of the transmission antenna is performed prior to modulation and after modulation begins. See, Specification, page 8, line 24 to page 9, line 4, page 12 lines 23-27 and page 14, lines 21-24. The tuning is in response to the detected power level of the device activation signal.

In contrast, the combination of Dykema and Roberts does not disclose, teach or suggest tuning a transmission antenna before applying a modulation scheme such that the power level of the device activation signal is controlled and tuning the transmission antenna assembly over a limited tuning range while applying the modulation scheme. Dykema teaches tuning an antenna 59 to “maximize the efficiency at which antenna 59 converts a received electromagnetic RF signal to an electrical signal during a receive mode and the efficiency at which antenna 59 radiates a transmitted electromagnetic RF signal in a transmit mode.” See, Dykema, col. 7, lines 34-38. Dykema, however, does not teach or suggest tuning an antenna based on a detected power level before applying a modulation scheme and while applying a modulation scheme. Roberts teaches tuning the an antenna while the transmitter is transmitting a signal. See, Roberts, col. 1, lines 65-66, col. 3, lines 3-9 and col. 5, 24-35. In addition, the Examiner indicated in the Office Action at page 10, paragraph 4 that the similar subject matter included in claim 5 was allowable. Accordingly, amended claims 1, 11 and 18 are allowable over Dykema in view of Roberts.

Claims 2-4, 7, and 9 depend from amended claim 1 and incorporate all of the limitations of amended claim 1 and are therefore allowable over Dykema in view of Roberts for, among other reasons, the same reasons as given above with respect to amended claim 1. Claims 12-13 and 17 depend from amended claim 11 and incorporate all of the limitations of amended claim 11 and are therefore allowable over Dykema in view of Roberts for, among other reasons, the same reasons as given above with respect to amended claim 11. Claim 20 depends from amended claim 18 and incorporates all of the limitations of amended claim 18

and is therefore allowable over Dykema in view of Roberts for, among other reasons, the same reasons as given above with respect to amended claim 18.

Accordingly, claims 1-4, 7, 9, 11-13, 17, 18 and 20 are believed to be in condition for allowance. Withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of claims 1-4, 7, 9, 11-13, 17, 18 and 20 is respectfully requested.

b. Claims 8, 10 and 15

Claims 8, 10 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dykema and Roberts in view of Elder et al. (“Elder,” U.S. Patent No. 6,658,239). Applicants respectfully traverse the rejection. Claims 8 and 10 depend from amended claim 1 and incorporate all of the limitations of amended claim 1 and are therefore allowable over Dykema and Roberts in view of Elder for, among other reasons, the same reasons as given above with respect to amended claim 1. Claim 15 depends from amended claim 11 and incorporates all of the limitations of amended claim 11 and is therefore allowable over Dykema and Roberts in view of Elder for, among other reasons, the same reasons as given above with respect to amended claim 11.

Accordingly, claims 8, 10 and 15 are believed to be in condition for allowance. Withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of claims 8, 10 and 15 is respectfully requested.

c. Claim 21

Claim 21 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Dykema in view of Anderson et al. (“Anderson,” U.S. Patent No. 4,343,001). Applicants respectfully traverse the rejection. Claim 21 has been amended to further define the invention.

Claim 21 is directed to a transmitter for transmitting a device activation signal or other data and recites, among other limitations:

a controller operable in a operating mode. . . ;

a transmission antenna assembly coupled to the signal generator circuit and the controller, . . .;

a detector circuit for detecting the phase shift of the device activation signal, the detector circuit providing the detected phase shift to the controller;

wherein the controller is further operable for tuning the transmission antenna assembly based on the detected phase shift including tuning the transmission antenna assembly before applying a modulation scheme such that the phase shift of the device activation signal is controlled and tuning the transmission antenna assembly over a limited tuning range while applying the modulation scheme.

As discussed in the specification, when a switch of the trainable transceiver is actuated, tuning of the transmission antenna is performed prior to modulation and after modulation begins. See, Specification, page 8, line 24 to page 9, line 4 and page 12 lines 23-27 and page 14, lines 21-24. The tuning may be in response to a detected phase shift of the device activation signal. See, Specification, page 8, lines 22-23.

In contrast, the combination of Dykema and Anderson does not disclose teach or suggest tuning a transmission antenna before applying a modulation scheme such that the phase shift of the device activation signal is controlled and tuning the transmission antenna assembly over a limited tuning range while applying the modulation scheme. Dykema teaches tuning an antenna 59 to “maximize the efficiency at which antenna 59 converts a received electromagnetic RF signal to an electrical signal during a receive mode and the efficiency at which antenna 59 radiates a transmitted electromagnetic RF signal in a transmit mode.” See, Dykema, col. 7, lines 34-38. Dykema, however, does not teach or suggest tuning an antenna based on a detected phase shift before applying a modulation schema and while applying a modulation scheme. Anderson teaches tuning the an antenna while the transmitter is transmitting a signal. See, col. 3, lines 59-64. In addition, the Examiner indicated in the Office Action at page 10, paragraph 4 that the similar subject matter included in claim 5 was allowable. Accordingly, claim 21 is allowable over Dykema in view of Anderson.

Accordingly, claim 21 is believed to be in condition for allowance. Withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of claim 21 is respectfully requested.

2. Claim Objections

Claims 5, 6 and 19 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 5 and 19 have been rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 6 depends from amended claim 5 and has been amended to correct a typographical error.

3. Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1447. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 06-1447.

Respectfully submitted,

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